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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/824,143	04/03/2001	Yoshiyuki Yasui	003510-089	8922

7590 09/08/2004

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EXAMINER

KING, BRADLEY T

ART UNIT	PAPER NUMBER
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3683

DATE MAILED: 09/08/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/824,143

Applicant(s)

YASUI ET AL.

Examiner

Bradley T King

Art Unit

3683

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 August 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2-8 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 2-8 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Applicant's request for reconsideration of the finality of the rejection of the last Office action is persuasive and, therefore, the finality of that action is withdrawn.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 3-4 and 7 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Claims 3-4 and 7 all require that the brake force of the object wheel be increased when the variation in the mu slopes is less than a predetermined value. This appears to contradict the disclosure. For instance, figure 3 and the related disclosure teaches the reduction of brake force when the variation is less than the predetermined value. It further would appear from the disclosure that an increase in the braking force of the object wheel in response to the variation less than the predetermined value would lead to inappropriate braking and loss of stability. Also note figure 5.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 3-7 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 3-7 recite "a predetermined value" and "the predetermined value". In light of the disclosure, it is unclear if these values are the same or different values. The claim language appears to indicate that they are the same, however the specification utilizes two different values. Please clarify.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 2, 5-6 and 8 are rejected under 35 U.S.C. 102(b) as being anticipated by EP 0825080.

EP 0825080 discloses all the limitations of the instant claims including: speed detecting means for detecting wheel speeds of respective wheels of a vehicle; road surface mu slope estimating means 12 for, on the basis of the detected wheel speeds 10, estimating for the respective wheels slopes of a coefficient of friction mu between

the wheels and a road surface as road surface μ slopes; control means for, on the basis of the road surface μ slopes estimated for the respective wheels by the road surface μ slope estimating means, distributing braking forces to the respective wheels by controlling the braking force of each wheel; and wherein on the basis of the detected wheel speeds, the road surface μ slope estimating means estimates slopes of braking forces with respect to wheel slip speeds as the road surface μ slopes for the respective wheels, and the control means controls a braking torque of a wheel which is an object of control on the basis of the road surface μ slope of the wheel which is an object of control and the road surface μ slope of a reference wheel among the road surface μ slopes estimated by the road surface μ slope estimating means. Note the embodiment of figure 42, steps 408 and 414. The low μ wheel is the reference wheel. If the μ difference is less than a predetermined value, the high μ wheel (object of control) is controlled based on its μ slope, otherwise it is controlled based on the μ slope of the reference wheel.

Regarding claim 3, EP 0825080 estimates the μ slope of a reference wheel and then performs follow-up control on a wheel which is the object of control according to wheel speed (and therefore wheel slip) since the object wheel is assumed to have the same μ . This is an estimate of the road surface μ slopes of the object wheel (as broadly recited). When there is variation of the wheel speeds, there is also a variation in the road μ slope between the wheels.

Regarding claim 5, see page 17 last paragraph. EP 0825080 teaches the use of the rear wheels as reference wheels.

Regarding claim 6, the braking device of EP 0825080 will behave as claimed when the reference wheel happens to be on the inside of a turn. The claim language fails to require any turn recognition.

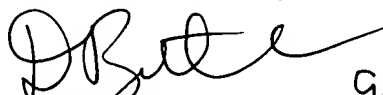
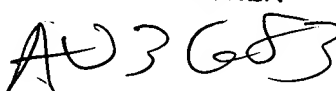
Regarding claim 8, see figure 43.

Response to Arguments

Applicant's arguments with respect to claims 2-8 have been considered but are moot in view of the new ground(s) of rejection.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bradley T King whose telephone number is (703) 308-8346. The examiner can normally be reached on 11:00-7:30 M-F.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1113.


DOUGLAS C. BUTLER
PRIMARY EXAMINER
9/2/04


BTK
September 1, 2004